

**DEPARTMENT OF THE AIR FORCE**  
**WASHINGTON 20330**



**OFFICE OF THE ASSISTANT SECRETARY**

**September 21, 1971**

**MEMORANDUM FOR MR. HANSEN**

**SUBJECT: Project SPIKE**

**ADC HIST FILE**

**229.3**

Following our review of the "New Initiatives" last Thursday, during which you raised some questions regarding Project SPIKE, I was asked on Friday, September 17, to review a SAMSO briefing before it was taken to the Vice Chief of Staff. The briefers were Colonel Dunn and Captain Tavernery (SAMSO). Colonel Daw (HQ/ADC) was along to support the using Command requirement, and the Air Staff was represented by Brigadier General Adams, Colonel Ahern and Colonel Farnsworth (AF/RDQ). I invited Dave McColi and Leo Weigand to join me in hearing the briefing. Attached is a copy of the briefing charts used.

While a considerable amount of analysis is reputed to have been accomplished, the briefing itself was fairly shallow. Many of the obvious technical questions required much more detailed back-up information than was available to the briefers. We concentrated on the following areas:

1. What was the rationale supporting the proposed intercepts, and why was the proposed air launch technique the preferred way of doing it?

The responses to these questions were very general and were essentially based upon an ADC mission response to the proposed "threat". The reasons advanced for using the airborne platform were to provide mobility for broad coverage and to achieve an "operational system". The arguments were advanced that this was not simply an experimental or retaliatory show of force approach but was, in fact, being tailored to ADC's expression of operational requirements. While time did not permit this to be pursued in depth, this appears to be a fairly fundamental point,

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## TRANSCRIPTION - ORIGINAL FOLLOWS

since, as will be indicated below, it could have a major impact upon the acceptability of technical risk and growth potential in the concept employed.

### 2. Technical Issues:

The SANSQ team continually referred to the "use of the state-of-the-art techniques and equipments", thereby implying a reasonably simple engineering task. We challenged this. Specially, I asked for a look at the error budget assumed to get a feel for the [illeg] of accuracy assumptions being used and the performance [illeg] needed in the system. These details were not available although [illeg] of the elements--such as, aircraft spatial position, missile separation and guidance, separation velocities and sensor pointing accuracy--were discussed. It is quite evident that while certain of the components which have been selected do exist, the integration of the entire system to perform within assumed parameters will be a very sophisticated system integration and development effort. Additionally, the terminal  
[lines excised]


At the conclusion of our discussions, I summarized by suggesting that they advise the Vice Chief that it was SAFRD's view that, while this was a fairly interesting concept, it was by no means a simple state-of-the-art engineering development but was a rather sophisticated development whose potential risk could not easily be assessed without

since, as will be indicated below, it could have a major impact upon the acceptability of technical risk and growth potential in the concept employed.

## 2. Technical Issues:

The SANSO team conventionally referred to "use of the state-of-the-art techniques and equipments", thereby implying a reasonably simple engineering task. We challenged this. Specifically, I asked for a look at the design task assumed to be a fairly simple task of aerodynamic geometry being used with a particular type of engine in the system. These details were not available although some of the elements--such as, aircraft's special position, missile separation and guidance, separation velocity and sensor pointing and other--were in hand. It is quite evident that, while certain of the objectives which have been selected do exist, the realization of the entire system to perform within assumed parameters will be a very sophisticated system in integration and development. Additionally, the terminal

At the time of the discussion, I was advised by suggesting that they were to the Chief that it was SANSO's view that, while it was a fairly interesting concept, it was not an immediate state-of-the-art engineering development. It was not sufficient development to show potential to make a contribution to the system.



detailed review of the assumptions used in the study. While an experimental airborne intercept system might prove feasible, its potential as an "operational system" required much more detailed review.

I understand that, following the briefing to the Vice Chief, he evidenced some interest in pursuing this further, although he understood the reservations advanced by us. However, in reviewing the "New Initiatives" package, General Glasser has decided to withdraw Project SPIKE as a "New Initiative". Some additional study will be conducted, but it will not be advanced as a new development project. Dave McColl, in checking with the west coast, has determined that Aerospace has now assigned several people to a more detailed analysis of the concept and possible tests and simulations that could be conducted to prove out the potentials of the terminal homing vehicle.

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Joe C. Jones  
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Attachments-2

1. Talking Paper on SPIKE
2. SAMSO/Aerospace Analysis of Project SPIKE (charts)